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Taxonomy of the order *Bunyavirales*: update 2019

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Abstract

In February 2019, following the annual taxon ratification vote, the order *Bunyavirales* was amended by creation of two new families, four new subfamilies, 11 new genera and 77 new species, merging of two species, and deletion of one species. This article presents the updated taxonomy of the order *Bunyavirales* now accepted by the International Committee on Taxonomy of Viruses (ICTV).

Keywords

Arenaviridae; arenavirid; arenavirus; bunyavirad; *Bunyavirales*; Bunyavirid; *Bunyaviridae*; bunyavirus; emaravirus; *Feraviridae*; feravirid; feravirus; fimovirid; *Fimoviridae*; fimovirus; goukovirus; hantavirid; *Hantaviridae*; hantavirus; hartmanivirus; herbevirus; ICTV; International Committee on Taxonomy of Viruses; jonvirid; *Jonviridae*; jonvirus; leishbuvirid; *Leishbuviridae*; leishbuvirus; mammarenavirus; nairovirid; *Nairoviridae*; nairovirus; orthobunyavirus; orthoferavirus; orthohantavirus; orthojonvirus; orthonairovirus; orthophasmavirus; orthospovirus; peribunyavirid; *Peribunyaviridae*; peribunyavirus; phasmavirid; phasivirus; *Phasmaviridae*; phasmavirus; phenuivirid; *Phenuiviridae*; phenuivirus; phlebovirus; reptarenavirus; tenuivirus; tospovirid; *Tospoviridae*; tospovirus; virus classification; virus nomenclature; virus taxonomy

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Compliance with ethical standards

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Conflict of interest

The authors declare no conflicts of interest.

Ethical approval

This article does not contain any studies with human participants or animals performed by any of the authors.

Introduction

The virus order *Bunyavirales* was established in 2017 to accommodate related viruses with segmented, linear, single-stranded, negative-sense or ambisense RNA genomes classified into nine families [19]. An amended/emended order description was published in early 2019 [20]. Here, we present the changes that were proposed via official ICTV taxonomic proposals that were accepted by the ICTV Executive Committee (EC) in February 2019. Therefore, these changes are now part of the official ICTV taxonomy.

Taxonomic changes at the order rank

The order was expanded by addition of two new families. Family *Leishbuviridae* was created to accommodate one new genus, *Shilevirus*, including one new species, *Leptomonas shilevirus*, for *Leptomonas moramango* leishbunyavirus (LEPMV) discovered in a trypanosomatid protist (*Leptomonas moramango*) [2]. Family *Tospoviridae* was recreated for the already established genus *Tospovirus* (now renamed *Orthotospovirus*; TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen) and expanded by seven new species (TaxoProp 2018.025P.A.v1.Orthotospovirus_7sp):

- *Bean necrotic mosaic orthotospovirus* for bean necrotic mosaic virus (BeNMV) discovered in common beans (*Phaseolus vulgaris*) [8];
- *Calla lily chlorotic spot orthotospovirus* for calla lily chlorotic spot virus (CCSV) found in calla lilies (*Zantedeschia* sp.) [5, 18];
- *Capsicum chlorosis orthotospovirus* for capsicum chlorosis virus (CaCV) found in capsicums, chillies, and tomatoes [16, 23];
- *Chrysanthemum stem necrosis orthotospovirus* for chrysanthemum stem necrosis virus (CSNV) infecting chrysanthemums [3, 10];
- *Melon severe mosaic orthotospovirus* for melon severe mosaic virus (MSMV) infecting cucurbit crops [6, 7];
- *Melon yellow spot orthotospovirus* for melon yellow spot virus (MYSV) found in netted melon (*Cucumis melo*) [15]; and
- *Soybean vein necrosis orthotospovirus* for soybean vein necrosis virus (SVNV) discovered in soybeans (*Glycine max*) [36].

A genus unassigned to any family, *Coguvirus*, was established to include species *Citrus coguvirus* for citrus concave gum-associated virus (CCGaV) found in citrus trees [26] (TaxoProp 2018.020P.A.v1.Coguvirus).

Taxonomic changes at the family rank

Arenaviridae

The family *Arenaviridae* was expanded by one genus, *Antennavirus*, to include two new species, *Hairy antennavirus* and *Striated antennavirus*, for Wēnlíng frogfish arenavirus 2

(WIFV-2) and Wēnlǐng frogfish arenavirus 1 (WIFV-1), both found in striated frogfish (*Antennarius striatus*) [33] (TaxoProp 2018.005M.A.v1.Antennavirus).

Cruliviridae

No changes were made at the family rank.

Fimoviridae

No changes were made at the family rank.

Hantaviridae

The family (TaxoProp 2018.010M.A.v2.Hantaviridae_4subfam) was reorganized into four subfamilies:

- subfamily *Actantavirinae* was created for the new genus *Actinavirus* to accommodate three novel species: *Batfish actinivirus* for Wēnlǐng minipizza batfish virus (WEMV) discovered in minipizza batfish (*Halieutaea stellata*); *Goosefish actinivirus* for Wēnlǐng yellow goosefish virus (WEYGV) found in yellow goosefish (*Lophius litulon*); and *Spikefish actinivirus* for Wēnlǐng red spikefish virus (WERSV) of red spikefish (*Triacanthodes anomalus*) [33];
- subfamily *Agantavirinae* was created for the new genus *Agnathovirus* to accommodate one new species, *Hagfish agnathovirus*, for Wēnlǐng hagfish virus (WEHV) of inshore hagfish (*Eptatretus burgeri*) [33];
- subfamily *Mammantavirinae* was created to accommodate the established genera *Loanvirus*, *Mobatvirus*, and *Orthohantavirus*. Two new orthohantavirus species, *Seewis orthohantavirus* and *Tigray orthohantavirus*, were created for Seewis virus (SWSV) of Eurasian common shrews (*Sorex araneus*) [34] and Tigray virus (TIGV) of Ethiopian white-footed mice (*Stenocephalemys albipes*) [12, 25], respectively; and
- subfamily *Repantavirinae* was created for the new genus *Reptillovirus* to accommodate one new species, *Gecko reptillovirus*, for Hǎinán oriental lead-toed gecko virus (HOLGV) discovered in oriental leaf-toed geckos (*Hemidactylus bowringii*) [33].

Mypoviridae

No changes were made at the family rank.

Nairoviridae

The species *Estero Real orthonairovirus* was created for Estero Real virus (ERV) (moved from genus *Orthobunyavirus*, family *Peribunyaviridae*) [1] (TaxoProp 2018.012M.A.v1.Bunyavirales_spmov).

Peribunyaviridae

The family was expanded by one new genus, *Pacuvirus*, to accommodate three new species: *Pacui pacuvirus* for Pacui virus (PACV) discovered in a rice rat (*Oryzomys* sp.); *Rio Preto da Eva pacuvirus* for Rio Preto da Eva virus discovered in a sewer gnat (Psychodidae sp.); and *Tapirape pacuvirus* for Tapirapé virus found in a holicudo (*Oxymycterus* sp.) [27] (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). Genus *Tospovirus* was removed from the family and placed into the new family *Tospoviridae* as genus *Orthotospovirus* (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). The genus *Orthobunyavirus* was reorganized by moving previously classified viruses into a total of 38 new species (one resulting from a merger of two previously established species) (TaxoProp 2018.008M.A.v1.Orthobunyavirus_38sp). Five additional novel species were added: *Bellavista orthobunyavirus* for Bellavista virus isolated from mosquitoes (*Culex portesi*) [14]; *Enseada orthobunyavirus* for Enseada virus isolated from *Culex* mosquitoes [4, 9]; *Maguari orthobunyavirus* for Maguari virus (MAGV) isolated from mosquitoes [13]; *Tataguine orthobunyavirus* for Tataguine virus (TATV) found in a human sample, and *Witwatersrand orthobunyavirus* for Witwatersrand virus (WITV) from mosquitoes [29] (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). Species *Estero Real orthobunyavirus* was abolished, and its member, Estero Real virus (ERV), was moved into family *Nairoviridae* [1] (TaxoProp 2018.012M.A.v1.Bunyavirales_spmov).

Phasmaviridae

The family was expanded by addition of one new genus, *Sawastrivirus*, to include one new species, *Sanxia sawastrivirus*, for Sānxiá water strider virus 2 (SxWSV-2) (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen) detected in gerrid water striders [31]. The genus *Orthophasmavirus* was expanded by the addition of five new species: *Culex orthophasmavirus* for *Culex* phasma-like virus (CPLV) detected in *Culex* mosquitoes [32]; *Ganda orthophasmavirus* for Ganda bee virus (GBEEV) of European orchard bees (*Osmia cornuta*) [28]; *Odonate orthophasmavirus* for Húběi odonate virus 8 (HbOV-8) [31]; *Qingling orthophasmavirus* for Húběi odonate virus 9 (HbOV-9) of odonates [31]; and *Seattle orthophasmavirus* for Seattle Prectang virus (SEPV) found in a moth (*Pasiphila rectangulata*) [21] (TaxoProp 2018.009M.A.v1.Phasmavirus_5sp).

Phenuiviridae

The family *Phenuiviridae* was expanded by addition of three new genera. Genus *Kabutovirus* was created to include two new species, *Huangpi kabutovirus* and *Kabuto mountain kabutovirus*, for Huángpí tick virus 1 (HpTV-1) of ticks (*Haemaphysalis doenitzi*) [17] and Kabuto mountain virus (KAMV) of ticks (*Haemaphysalis flava*) [11], respectively. Genus *Laulavirus* was created to include one species, *Laurel Lake laulavirus*, for Laurel Lake virus (LLV) of ticks (*Ixodes scapularis*) [35]. Genus *Wenrivirus* was created to include one species, *Shrimp wenrivirus*, for Wēnzhōu shrimp virus 1 (WzSV-1) [17] found in giant tiger prawns (*Penaeus monodon*) [17] (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). The established genus *Banyangvirus* was expanded by two species, *Guertu banyangvirus* and *Heartland banyangvirus*, for Guertu virus (GTV) found in *Dermacentor nuttalli* ticks [30] and Heartland virus (HRTV), a tick-borne virus originally discovered in human samples

[24], respectively (TaxoProp 2018.013M.A.v1.Banyangvirus_sp; TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). Genus *Phlebovirus* was expanded by one species, *Mukawa phlebovirus*, for Mukawa virus (MKWV) of ticks (*Ixodes persulcatus*) [22] (TaxoProp 2018.014M.A.v1.Phlebovirus_sp). In genus *Phasivirus*, species *Wuhan fly phasivirus* was abolished (TaxoProp 2018.019M.A.v1.Phenuiviridae_Remsp).

Wupedeviridae

No changes were made at the family rank.

Summary

A summary of the current, ICTV-accepted taxonomy of the order *Bunyavirales* is presented in Table 1.

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Table 1

ICTV-accepted taxonomy of the order *Bunyavirales* as of February 2019. Listed are all bunyaviruses that are classified into species

Genus	Species [¶]	Virus (abbreviation) [¶]
Family <i>Arenaviridae</i>		
<i>Antennavirus</i>	<i>Hairy antennavirus</i>	Wenling frogfish arenavirus 2 (WIFAV-2)
	<i>Striated antennavirus</i> *	Wenling frogfish arenavirus 1 (WIFAV-1)
<i>Hartmanivirus</i>	<i>Hartman hartmanivirus</i> *	Haartman Institute snake virus 1 (HISV-1)
<i>Mammarenavirus</i>	<i>Alpahuayo mammarenavirus</i>	Alpahuayo virus (ALLV)
	<i>Argentinian mammarenavirus</i>	Junin virus (JUNV)
	<i>Bear Canyon mammarenavirus</i>	Bear Canyon virus (BCNV)
	<i>Brazilian mammarenavirus</i>	Sabiá virus (SBAV)
	<i>Cali mammarenavirus</i>	Pichindé virus (PICHV)
	<i>Chapare mammarenavirus</i>	Chapare virus (CHAPV)
	<i>Cupixi mammarenavirus</i>	Cupixi virus (CUPXV)
	<i>Flexal mammarenavirus</i>	Flexal virus (FLEV)
	<i>Gairo mammarenavirus</i>	Gairo virus (GAIV)
	<i>Guanarito mammarenavirus</i>	Guanarito virus (GTOV)
	<i>Ippy mammarenavirus</i>	Ippy virus (IPPYV)
	<i>Lassa mammarenavirus</i>	Lassa virus (LASV)
	<i>Latino mammarenavirus</i>	Latino virus (LATV)
	<i>Loei River mammarenavirus</i>	Loei River virus (LORV)
	<i>Lujo mammarenavirus</i>	Lujo virus (LUJV)
	<i>Luna mammarenavirus</i>	Luli virus (LULV)
		Luna virus (LUAV)
	<i>Lunk mammarenavirus</i>	Lunk virus (LNKV)
	<i>Lymphocytic choriomeningitis mammarenavirus</i> *	Dandenong virus (DANV)
		lymphocytic choriomeningitis virus (LCMV)
	<i>Machupo mammarenavirus</i>	Machupo virus (MACV)
	<i>Mariental mammarenavirus</i>	Mariental virus (MRLV)
	<i>Merino Walk mammarenavirus</i>	Merino Walk virus (MRWV)
	<i>Mobala mammarenavirus</i>	mobala virus (MOBV)

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Genus	Species	Virus (abbreviation)
	<i>European mountain ash ringspot-associated emaravirus</i> *	European mountain ash ringspot-associated virus (EMARaV)
	<i>Fig mosaic emaravirus</i>	fig mosaic virus (FMV)
	<i>High Plains wheat mosaic emaravirus</i>	High Plains wheat mosaic virus (HPWMoV)
	<i>Pigeonpea sterility mosaic emaravirus 1</i>	pigeonpea sterility mosaic virus (PPSMV)
	<i>Pigeonpea sterility mosaic emaravirus 2</i>	pigeonpea sterility mosaic virus 2 (PPSMV-2)
	<i>Raspberry leaf blotch emaravirus</i>	raspberry leaf blotch virus (RLBV)
	<i>Redbud yellow ringspot-associated emaravirus</i>	redbud yellow ringspot-associated virus (RYRaV)
	<i>Rose rosette emaravirus</i>	rose rosette virus (RRV)
		Family <i>Hantaviridae</i>
		Subfamily <i>Actantavirinae</i>
<i>Actinivirus</i>	<i>Batfish actinivirus</i> *	Wënling minipizza batfish virus (WEMBV)
	<i>Goosefish actinivirus</i>	Wënling yellow goosefish virus (WEYGV)
	<i>Spikefish actinivirus</i>	Wënling red spikefish virus (WERSV)
<i>Agnathovirus</i>	<i>Hagfish agnathovirus</i> *	Wënling hagfish virus (WEHV)
		Subfamily <i>Mammantavirinae</i>
<i>Loanvirus</i>	<i>Longquan loanvirus</i> *	Lóngquán virus (LQUV)
<i>Mobatvirus</i>	<i>Laibin mobatvirus</i>	Láibīn virus (LAIV)
	<i>Nova mobatvirus</i> *	Nova virus (NVAV)
	<i>Quezon mobatvirus</i>	Quezon virus (QZNV)
<i>Orthohantavirus</i>	<i>Andes orthohantavirus</i>	Andes virus (ANDV)
		Castelo dos Sonhos virus (CASV)
		Lechiguanas virus (LECV = LECHV)
		Orán virus (ORNV)
	<i>Asama orthohantavirus</i>	Asama virus (ASAV)
	<i>Asikkala orthohantavirus</i>	Asikkala virus (ASIV)
	<i>Bayou orthohantavirus</i>	bayou virus (BAYV)
		Catacamas virus (CATV)
	<i>Black Creek Canal orthohantavirus</i>	Black Creek Canal virus (BCCV)

Genus	Species	Virus (abbreviation)
	<i>Bowe orthohantavirus</i>	Bowé virus (BOWV)
	<i>Bruges orthohantavirus</i>	Bruges virus (BRGV)
	<i>Cano Delgadito orthohantavirus</i>	Caño Delgadito virus (CADV)
	<i>Cao Bang orthohantavirus</i>	Cao Bang virus (CBNV)
		Liánghé virus (LHEV)
	<i>Choclo orthohantavirus</i>	Choclo virus (CHOV)
	<i>Dabieshan orthohantavirus</i>	Dàbiěshān virus (DBSV)
	<i>Dobrava-Belgrade orthohantavirus</i>	Dobrava virus (DOBV)
		Kurkino virus (KURV)
		Saaremaa virus (SAAV)
		Sochi virus (SOCV)
		Carrizal virus (CARV)
	<i>El Moro Canyon orthohantavirus</i>	El Moro Canyon virus (ELMCV)
		Huitzilac virus (HUIV)
	<i>Fugong orthohantavirus</i>	Fùgōng virus (FUGV)
	<i>Fusong orthohantavirus</i>	Fūsōng virus (FUSV)
	<i>Hantaan orthohantavirus</i> *	Amur virus (AMRV)
		Hantaan virus (HTNV)
		Soochong virus (SOOV)
	<i>Jeju orthohantavirus</i>	Jeju virus (JIUV)
	<i>Kenkeme orthohantavirus</i>	Kenkeme virus (KKMV)
	<i>Khabarovsk orthohantavirus</i>	Khabarovsk virus (KHAV)
		Topografov virus (TOPV)
	<i>Laguna Negra orthohantavirus</i>	Laguna Negra virus (LANV)
		Maripa virus (MARV)
		Rio Mamoré virus (RIOMV)
	<i>Luxi orthohantavirus</i>	Lúxī virus (LUXV)
	<i>Maporal orthohantavirus</i>	Maporal virus (MAPV)
	<i>Montano orthohantavirus</i>	Montaño virus (MTNV)
	<i>Necocli orthohantavirus</i>	Necocli virus (NECV)
	<i>Oxbow orthohantavirus</i>	Oxbow virus (OXBV)

Genus	Species	Virus (abbreviation)
	<i>Prospect Hill orthohantavirus</i>	Prospect Hill virus (PHV)
	<i>Puumala orthohantavirus</i>	Hokkaido virus (HOKV)
		Muju virus (MUJV)
		Puumala virus (PUUV)
	<i>Rockport orthohantavirus</i>	Rockport virus (RKPV)
	<i>Sangassou orthohantavirus</i>	Sangassou virus (SANGV)
	<i>Seewis orthohantavirus</i>	Seewis virus (SWSV)
	<i>Seoul orthohantavirus</i>	gōu virus (GOUV)
		Seoul virus (SEOV)
	<i>Sin Nombre orthohantavirus</i>	New York virus (NYV)
		Sin Nombre virus (SNV)
	<i>Thailand orthohantavirus</i>	Anjzorobe virus (ANJZV)
		Serang virus (SERV)
	<i>Tigra orthohantavirus</i>	Thailand virus (THAIV)
	<i>Tula orthohantavirus</i>	Tigra virus (TIGV)
		Adler virus (ADLV)
	<i>Yakeshi orthohantavirus</i>	Tula virus (TULV)
	<i>Imjin thottimvirus</i>	Yakeshi virus (YKSV)
	<i>Thottapalayam thottimvirus</i> *	Imjin virus (MJNV)
		Thottapalayam virus (TPMV)
		Subfamily <i>Repantavirinae</i>
	<i>Gecko reptilovirus</i> *	Hainan oriental leaf-toed gecko virus (HOLGV)
		Family <i>Leishbuviridae</i>
	<i>Leptomonas shilevirus</i> *	Leptomonas moramango virus (LEPMV)
	<i>Myriapod hubavirus</i> *	Hubei myriapoda virus 5 (HbMV-5)
		Family <i>Nairoviridae</i>
	<i>Artashat orthonairovirus</i>	Artashat virus (ARTSV)
	<i>Chim orthonairovirus</i>	Chim virus (CHIMV)
	<i>Crimean-Congo hemorrhagic fever</i>	Crimean-Congo hemorrhagic fever virus

Genus	Species	Virus (abbreviation)
<i>orthonairovirus</i>	<i>Dera Ghazi Khan orthonairovirus</i>	(CCHFV)
		Abu Hammad virus (AHV)
	<i>Dugbe orthonairovirus</i> *	Abu Mina virus (AMV)
		Dera Ghazi Khan virus (DGKV)
	<i>Estero Real orthonairovirus</i>	Sapphire II virus (SAPV)
		Dugbe virus (DUGV)
	<i>Hazara orthonairovirus</i>	Kupe virus (KUPEV)
		Estero Real virus (ERV)
	<i>Hughes orthonairovirus</i>	Hazara virus (HAZV)
		Tofla virus (TFLV)
<i>Kasokero orthonairovirus</i>	<i>Keterah orthonairovirus</i>	Caspiy virus (CASV)
		Farallon virus (FARV)
	<i>Nairobi sheep disease orthonairovirus</i>	Great Saltee virus (GRSV)
		Hughes virus (HUGV)
	<i>Qalyub orthonairovirus</i>	Punta Salinas virus (PSV)
		Raza virus (RAZAV)
	<i>Sakhalin orthonairovirus</i>	Soldado virus (SOLV)
		Zirqa virus (ZIRV)
	<i>Clo Mor virus (CMV = CLMV)</i>	Kasokero virus (KASV = KASOV)
		Leopards Hill virus (LPHV)
<i>Sakhalin orthonairovirus</i>	<i>Nairobi sheep disease orthonairovirus</i>	Yogue virus (YOGV)
		Gossas virus (GOSV)
	<i>Qalyub orthonairovirus</i>	Issyk-kul virus (ISKV)
		Keterah virus (KTRV)
	<i>Sakhalin orthonairovirus</i>	Uzun-Agach virus (UZAV)
		Nairobi sheep disease virus (NSDV)
	<i>Qalyub orthonairovirus</i>	Bandia virus (BDV)
		Geran virus (GERV)
	<i>Sakhalin orthonairovirus</i>	Qalyub virus (QYBV)
		Avalon virus (AVAV)

Genus	Species [¶]	Virus (abbreviation) [¶]
		Sakhalin virus (SAKV)
		Taggart virus (TAGV)
		Tillamook virus (TILLV)
	<i>Tamdy orthonairovirus</i>	Burana virus (BURV)
		Huángpí tick virus 1 (HpTV-1)
		Táchéng tick virus 1 (TcTV-1)
		Tamdy virus (TAMV)
		Wēnzhōu tick virus (WzTV)
	<i>Thiafora orthonairovirus</i>	Erve virus (ERVEV)
		Thiafora virus (TFAV)
<i>Shaspivirus</i>	<i>Spider shaspivirus</i> [*]	Shāyáng spider virus 1 (SySV-1)
<i>Striavirus</i>	<i>Strider striavirus</i> [*]	Sānxiá water strider virus 1 (SxWSV-1)
Family <i>Peribunyaviridae</i>		
<i>Herbivirus</i>	<i>Herbert herbivirus</i> [*]	Herbert virus (HEBV)
	<i>Kibale herbivirus</i>	Kibale virus (KIBV)
	<i>Tai herbivirus</i>	Tai virus (TAIV)
<i>Orthobunyavirus</i>	<i>Acara orthobunyavirus</i>	Acará virus (ACAV)
		Moriche virus (MORV)
	<i>Aino orthobunyavirus</i>	Aino virus (AINOV)
	<i>Akabane orthobunyavirus</i>	Akabane virus (AKAV)
		Tinaroo virus (TINV)
		Yaba-7 virus (Y7V)
	<i>Alajuela orthobunyavirus</i>	Alajuela virus (ALJV)
		San Juan virus (SIV)
	<i>Anadyr orthobunyavirus</i>	Anadyr virus (ANADV)
	<i>Anhembi orthobunyavirus</i>	Anhembi virus (AMBV)
	<i>Anopheles A orthobunyavirus</i>	Anopheles A virus (ANAV)
		Arumateua virus (ARTV = ARMTV)
		Caraipé virus (CPEV = CRPV)
		Las Maloyas virus (LMV)

Genus	Species	Virus (abbreviation)
		Lukuni virus (LUKV)
		Trombetas virus (TRMV)
		Tucunui virus (TUCV = TUCRV)
	<i>Anopheles B orthobunyavirus</i>	Anopheles B virus (ANBV)
		Boracéia virus (BORV)
	<i>Bakau orthobunyavirus</i>	Bakau virus (BAKV)
		Ketapang virus (KETV)
		Nola virus (NOLAV)
		Tanjong Rabok virus (TRV)
		Telok Forest virus (TFV)
		Batai virus (BATV)
	<i>Batama orthobunyavirus</i>	Batama virus (BMAV)
	<i>Bellavista orthobunyavirus</i>	Bellavista virus (BELLV)
	<i>Benevides orthobunyavirus</i>	Benevides virus (BVSV = BENV)
	<i>Bertioga orthobunyavirus</i>	Bertioga virus (BERV)
		Cananéia virus (CNAV)
		Guaratuba virus (GTBV)
		Itimirim virus (ITIV)
		Mirim virus (MIRV)
	<i>Bimiti orthobunyavirus</i>	bimiti virus (BIMV)
	<i>Birao orthobunyavirus</i>	Birao virus (BIRV)
	<i>Botambi orthobunyavirus</i>	Botambi virus (BOTV)
	<i>Bozo orthobunyavirus</i>	Bozo virus (BOZOV)
	<i>Bunyamwera orthobunyavirus</i> *	Bunyamwera virus (BUNV)
		Germiston virus (GERV)
		Lokem virus (LOKV)
		Mboké virus (MBOV)
		Ngari virus (NRIV)
		Northway virus (NORV)
		Santa Rosa virus (SARV)
		Shokwe virus (SHOV)

Genus	Species	Virus (abbreviation)
		Stanfield virus (STAV)
		Xingu virus (XINV)
	<i>Bushbush orthobunyavirus</i>	Benfica virus (BENV = BNFV)
		Bushbush virus (BSBV)
		Juan Díaz virus (JDV)
	<i>Buttonwillow orthobunyavirus</i>	Buttonwillow virus (BUTV)
	<i>Bwamba orthobunyavirus</i>	Bwamba virus (BWAV)
		Pongola virus (PGAV)
	<i>Cache Valley orthobunyavirus</i>	Cache Valley virus (CVV)
		Cholul virus (CHLV)
		Tlacotalpan virus (TLAV)
	<i>Cachoeira Porteira orthobunyavirus</i>	Cachoeira Porteira virus (CPOV)
	<i>California encephalitis orthobunyavirus</i>	California encephalitis virus (CEV)
		Morro Bay virus (MBV)
	<i>Capim orthobunyavirus</i>	Capim virus (CAPV)
	<i>Caraparu orthobunyavirus</i>	Apeú virus (APEUV)
		Bruconha virus (BRUV)
		Caraparu virus (CARV)
		El Huayo virus (EHUV)
		Itaya virus (ITYV)
		Ossa virus (OSSAV)
		Vinces virus (VINV)
	<i>Cat Que orthobunyavirus</i>	Cát Qué virus (CQV)
		Oya virus (OYAV)
	<i>Catu orthobunyavirus</i>	Catú virus (CATUV)
	<i>Enseada orthobunyavirus</i>	Enseada virus (ENSV)
	<i>Faceys paddock orthobunyavirus</i>	Facey's paddock virus (FPV)
	<i>Fort Sherman orthobunyavirus</i>	Fort Sherman virus (FSV)
	<i>Gamboa orthobunyavirus</i>	Brus Laguna virus (BLAV)
		Calchaqui virus (CQIV)
		Gamboa virus (GAMV)

Genus	Species	Virus (abbreviation)
		Pueblo Viejo virus (PVV)
		Soberanía virus (SOBV)
	<i>Guajara orthobunyavirus</i>	Guajará virus (GJAV)
	<i>Guama orthobunyavirus</i>	Ananindeua virus (ANUV)
		Guamá virus (GMAV)
		Mahogany Hammock virus (MHV)
		Moju virus (MOJUV)
	<i>Guaroa orthobunyavirus</i>	Guaroa virus (GROV)
	<i>Iaco orthobunyavirus</i>	Iaco virus (IACOV)
	<i>Ilesha orthobunyavirus</i>	Ilesha virus (ILEV)
	<i>Ingwavuma orthobunyavirus</i>	Ingwavuma virus (INGV)
	<i>Jamestown Canyon orthobunyavirus</i>	Inkoo virus (INKV)
		Jamestown Canyon virus (JCV)
		Jerry Slough virus (JSV)
		South River virus (SORV)
	<i>Jatobal orthobunyavirus</i>	Jatobal virus (JATV)
	<i>Kaeng Khoi orthobunyavirus</i>	Kaeng Khoi virus (KKV)
	<i>Kairi orthobunyavirus</i>	Kairi virus (KRIV)
	<i>Keystone orthobunyavirus</i>	Keystone virus (KEYV)
	<i>Koongol orthobunyavirus</i>	koongol virus (KOOV)
		wongal virus (WONV)
	<i>La Crosse orthobunyavirus</i>	La Crosse virus (LACV)
	<i>Leanyer orthobunyavirus</i>	Leanyer virus (LEAV)
	<i>Lumbo orthobunyavirus</i>	Lumbo virus (LUMV)
	<i>Macaua orthobunyavirus</i>	Macauã virus (MACV)
	<i>Madrid orthobunyavirus</i>	Madrid virus (MADV)
	<i>Maguari orthobunyavirus</i>	Maguari virus (MAGV)
		Playas virus (PLAV)
	<i>Main Drain orthobunyavirus</i>	Main Drain virus (MDV)
	<i>Manzanilla orthobunyavirus</i>	Manzanilla virus (MANV)
		Inini virus (INIV)

Genus	Species	Virus (abbreviation)
<i>Mariutaba orthobunyavirus</i>		Gumbo Limbo virus (GLV)
		Mariutaba virus (MTBV)
		Murutucú virus (MURV)
		Nepuyo virus (NEPV)
		Restan virus (RESV)
<i>Melao orthobunyavirus</i>		Zungarococha virus (ZUNV)
		Melao virus (MELV)
		Mermet virus (MERV)
		Minatitlán virus (MINTV)
		Palestina virus (PLSV)
<i>MPoko orthobunyavirus</i>		MPoko virus (MPOV)
		Yaba-1 virus (Y1V)
<i>Nyando orthobunyavirus</i>		Eretmapodites virus (ERETV)
		Mojui dos Campos virus (MDCV)
		Nyando virus (NDV)
<i>Olifantsvlei orthobunyavirus</i>		Bobia virus (BIAV)
		Dabakala virus (DABV)
		Olifantsvlei virus (OLIV)
		Oubi virus (OUBIV)
		Itaqui virus (ITQV)
<i>Oriboca orthobunyavirus</i>		Oriboca virus (ORIV)
		Iquitos virus (IQTV) ^d
		Madre de Dios virus (MDDV)
<i>Oropouche orthobunyavirus</i>		Oropouche virus (OROV)
		Perdões virus (PDEV)
		Pintupo virus (PINTV)
		Abras virus (ABRV)
		Babahoya virus (BABV)
<i>Patois orthobunyavirus</i>		Pahayokee virus (PAHV)
		Patois virus (PATV)
		Shark River virus (SRV)

Genus	Species	Virus (abbreviation)
	<i>Peaton orthobunyavirus</i>	Peaton virus (PEAV)
	<i>Potosi orthobunyavirus</i>	Potosi virus (POTV)
	<i>Sabo orthobunyavirus</i>	Sabo virus (SABOV)
	<i>San Angelo orthobunyavirus</i>	San Angelo virus (SAV)
	<i>Sango orthobunyavirus</i>	Sango virus (SANV)
	<i>Schmallenberg orthobunyavirus</i>	Douglas virus (DOUV)
		Sathuperi virus (SATV)
		Schmallenberg virus (SBV)
		Shamonda virus (SHAV)
	<i>Serra do Navio orthobunyavirus</i>	Serra do Navio virus (SDNV)
	<i>Shuni orthobunyavirus</i>	Kaikalur virus (KAIV)
		Shuni virus (SHUV)
	<i>Simbu orthobunyavirus</i>	Para virus (PARAV)
		Simbu virus (SIMV)
	<i>Snowshoe hare orthobunyavirus</i>	Khatanga virus (KHATV) ⁹
		snowshoe hare virus (SSHV)
	<i>Sororoca orthobunyavirus</i>	Sororoca virus (SORV)
	<i>Tacaiuma orthobunyavirus</i>	CoAr 1071 virus (CA1071V)
		CoAr 3627 virus (CA3626V)
		Tacaiuma virus (TCMV)
		Virgin River virus (VRV)
	<i>Tahyna orthobunyavirus</i>	Tahyña virus (TAHV)
	<i>Tataguine orthobunyavirus</i>	Tataguine virus (TATV)
	<i>Tensaw orthobunyavirus</i>	Tensaw virus (TENV)
	<i>Tete orthobunyavirus</i>	Bahig virus (BAHV)
		Matruh virus (MTRV)
		Tete virus (TETEV)
		Tsuruse virus (TSUV)
		Weldona virus (WELV)
	<i>Thimiri orthobunyavirus</i>	Thimiri virus (THIV)
	<i>Timboteua orthobunyavirus</i>	Timboteua virus (TBTV)

Genus	Species	Virus (abbreviation)
	<i>Trivittatus orthobunyavirus</i>	Achiote virus (ACHOV)
	<i>Turlock orthobunyavirus</i>	Trivittatus virus (TVTV)
		Lednice virus (LEDV)
		Turlock virus (TURV)
		Umbre virus (UMBV)
	<i>Utinga orthobunyavirus</i>	Utinga virus (UTIV)
	<i>Witwatersrand orthobunyavirus</i>	Witwatersrand virus (WITV)
	<i>Wolkberg orthobunyavirus</i>	Wolkberg virus (WBV)
	<i>Wyeomyia orthobunyavirus</i>	Rio Pracupi virus
		Taiassui virus (TAIAV)
		Tucunduba virus (TUCV)
		Wyeomyia virus (WYOV)
	<i>Zegla orthobunyavirus</i>	Zegla virus (ZEGV)
<i>Pacuvirus</i>	<i>Pacui pacuvirus</i> *	Pacui virus (PACV)
	<i>Rio Preto da Eva pacuvirus</i>	Rio Preto da Eva virus (RPEV)
	<i>Tapirape pacuvirus</i>	Tapirapé virus (TAPV)
<i>Shangavirus</i>	<i>Insect shangavirus</i> *	Shuangáo insect virus 1 (SgIV-1)
Family Phasmaviridae		
<i>Feravirus</i>	<i>Ferak feravirus</i> *	Ferak virus (FRKV)
<i>Inshuvirus</i>	<i>Insect inshuvirus</i> *	Shuangáo insect virus 2 (SgIV-2)
<i>Jonvirus</i>	<i>Jonchet jonvirus</i> *	Jonchet virus (JONV)
<i>Orthophasmavirus</i>	<i>Culex orthophasmavirus</i>	Culex orthophasmavirus (CPLV)
	<i>Ganda orthophasmavirus</i>	Ganda orthophasmavirus (GBEV)
	<i>Kigluaik phantom orthophasmavirus</i> *	Kigluaik phantom virus (KIGV)
	<i>Nome phantom orthophasmavirus</i>	Nome phantom virus (NOMV)
	<i>Odonate orthophasmavirus</i>	Odonate orthophasmavirus (HbOV-8)
	<i>Qingling orthophasmavirus</i>	Qingling orthophasmavirus (HbOV-9)
	<i>Seattle orthophasmavirus</i>	Seattle orthophasmavirus (SEPV)
	<i>Wuchang cockroach orthophasmavirus 1</i>	Wuchang cockroach virus 1 (WeCV-1)
	<i>Wuhan mosquito orthophasmavirus 1</i>	Wuhan mosquito virus 1 (WhMV-1)

Genus	Species	Virus (abbreviation)
<i>Sawastriovirus</i>	<i>Wuhan mosquito orthophasmavirus 2</i>	Wuhan mosquito virus 2 (WhMV-2)
<i>Wuhivirus</i>	<i>Sanxia sawastriovirus</i> *	Sānxiá water strider virus 2 (SxWSV-2)
	<i>Insect wuhivirus</i> *	Wùhàn insect virus 2 (WhIV-2)
Family <i>Phenuiviridae</i>		
<i>Banyangvirus</i>	<i>Guertu banyangvirus</i>	Guertu virus (GTV)
	<i>Heartland banyangvirus</i>	Heartland virus (HRTV)
	<i>Huaiyangshan banyangvirus</i> *	severe fever with thrombocytopenia syndrome virus (SFTSV)
<i>Beidivirus</i>	<i>Dipteran beidivirus</i> *	Húběi diptera virus 3 (HbDV-3)
<i>Goukovirus</i>	<i>Cumuto goukovirus</i>	Cumuto virus (CUMV)
	<i>Gouleako goukovirus</i> *	Gouléako virus (GOLV)
	<i>Yichang insect goukovirus</i>	Yíchāng insect virus (YcIV)
<i>Horwivirus</i>	<i>Horsefly horwivirus</i> *	Wùhàn horsefly virus (WhHV)
<i>Hudivirus</i>	<i>Dipteran hudivirus</i> *	Húběi diptera virus 4 (HbDV-4)
<i>Hudovirus</i>	<i>Lepidopteran hudovirus</i> *	Húběi lepidoptera virus 1 (HbLV-1)
<i>Kabutovirus</i>	<i>Huangpi kabutovirus</i> *	Huángpí tick virus 2 (HpTV-2)
	<i>Kabuto mountain kabutovirus</i>	Kabuto mountain virus (KAMV)
<i>Laulavirus</i>	<i>Laurel Lake laulavirus</i> *	Laurel Lake virus (LLV)
<i>Mobuvirus</i>	<i>Mothra mobuvirus</i> *	Mothra virus (MTHV)
<i>Phasivirus</i>	<i>Badu phasivirus</i> *	Badu virus (BADUV)
	<i>Phasi Chaeron-like phasivirus</i>	Phasi Chaeron-like virus (PCLV)
	<i>Wutai mosquito phasivirus</i>	Wūtái mosquito virus (WtMV)
<i>Phlebovirus</i>	<i>Bujaru phlebovirus</i>	Bujaru virus (BUJV)
		Munguba virus (MUNV)
	<i>Candiru phlebovirus</i>	Alenquer virus (ALEV)
		Ariquemes virus (ARQV)
		Candirú virus (CDUV)
		Itaituba virus (ITAV)
		Jacundá virus (JCNV)

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Genus	Species	Virus (abbreviation)
		Balkan virus (BALKV)
		Fermo virus (FERV)
		Gordil virus (GORV)
		Granada virus (GRV = GRAV)
		Massilia virus (MASV)
		Punique virus (PUNV)
		Saddaguia virus (SADV)
		Saint-Floris virus (SAFV)
		sandfly fever Naples virus (SFNV)
		Tehran virus (THEV)
		Toscana virus (TOSV)
		Zerdali virus (ZERV)
		Chizé virus (CHZV)
		EgAN 1825–61 virus (EGAV)
		Fin V 707 virus (FINV)
		Oceanside virus (OCV = OCEV)
		Pontevès virus (PTVV)
		St. Abbs Head virus (SAHV)
		Uukuniemi virus (UUKV)
		Zaliv Terpeniya virus (ZTV)
		Pidgey virus (PGYV)
<i>Pidchovirus</i>	<i>Pidgey pidchovirus</i> *	
<i>Tenuivirus</i>	<i>Echinochloa hoja blanca tenuivirus</i>	Echinochloa hoja blanca virus (EHBV)
	<i>Iranian wheat stripe tenuivirus</i>	Iranian wheat stripe virus (IWSV)
	<i>Maize stripe tenuivirus</i>	maize stripe virus (MSV = MSPV)
	<i>Rice grassy stunt tenuivirus</i>	rice grassy stunt virus (RGSV)
	<i>Rice hoja blanca tenuivirus</i>	rice hoja blanca virus (RHBV)
	<i>Rice stripe tenuivirus</i> *	rice stripe virus (RSV = RSIV)
	<i>Urochloa hoja blanca tenuivirus</i>	Urochloa hoja blanca virus (UHBV)
<i>Wentivirus</i>	<i>Shrimp wentivirus</i> *	Wēnzhōu shrimp virus 1 WzSV-1
<i>Wubeivirus</i>	<i>Dipteran wubeivirus</i> *	Húběi diptera virus 5 (HbDV-5)

Genus	Species [¶]	Virus (abbreviation) [¶]
	<i>Fly wubeivirus</i>	Wūhàn fly virus 1 (WhFV-1)
	Family <i>Tospoviridae</i>	
<i>Orthotospovirus</i>	<i>Bean necrotic mosaic orthotospovirus</i>	bean necrotic mosaic virus (BeNMV)
	<i>Calla lily chlorotic spot orthotospovirus</i>	calla lily chlorotic spot virus (CCSV)
	<i>Capsicum chlorosis orthotospovirus</i>	capsicum chlorosis virus (CaCV)
	<i>Chrysanthemum stem necrosis orthotospovirus</i>	chrysanthemum stem necrosis virus (CSNV)
	<i>Groundnut bud necrosis tospovirus</i> [†]	groundnut bud necrosis virus (GBNV)
	<i>Groundnut ringspot tospovirus</i> [†]	groundnut ringspot virus (GRSV)
	<i>Groundnut yellow spot tospovirus</i> [†]	groundnut yellow spot virus (GYSV)
	<i>Impatiens necrotic spot tospovirus</i> [†]	impatiens necrotic spot virus (INSV)
	<i>Iris yellow spot tospovirus</i> [†]	iris yellow spot virus (IYSV)
	<i>Melon severe mosaic orthotospovirus</i>	melon severe mosaic virus (MSMV)
	<i>Melon yellow spot orthotospovirus</i>	melon yellow spot virus (MYSV)
	<i>Polygonum ringspot tospovirus</i> [†]	polygonum ringspot virus (PolRSV)
	<i>Soybean vein necrosis orthotospovirus</i>	soybean vein necrosis virus (SVNV)
	<i>Tomato chlorotic spot tospovirus</i> [†]	tomato chlorotic spot virus (TCSV)
	<i>Tomato spotted wilt tospovirus</i> ^{*†}	tomato spotted wilt virus (TSWV)
	<i>Watermelon bud necrosis tospovirus</i> [†]	watermelon bud necrosis virus (WBNV)
	<i>Watermelon silver mottle tospovirus</i> [†]	watermelon silver mottle virus (WSMoV)
	<i>Zucchini lethal chlorosis tospovirus</i> [†]	zucchini lethal chlorosis virus (ZLCV)
	Family <i>Wupedeviridae</i>	
<i>Wumivirus</i>	<i>Millipede wumivirus</i> [*]	Wūhàn millipede virus 2 (WhMV-2)
	Unassigned	
<i>Coguvirus</i>	<i>Citrus coguvirus</i> [*]	citrus concave gum-associated virus (CCGaV)

^{*} type species

[†] Due to a formal classification mistake, this species was not correctly renamed to include the genus epithet “*orthotospovirus*”. A proposal to ensure that all species included in the genus *Orthotospovirus* are named uniformly ending in “*orthotospovirus*” will be submitted prior to the next taxonomic proposal submission deadline.

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Please note that viruses are real objects that are assigned to concepts that are called taxa. Species, genera, families, and orders are taxa. Taxon names are always italicized and always begin with a capital letter. Virus names, on the other hand, are not italicized and are not capitalized, except if the name or a name component is a proper noun. This column lists the virus names with their correct (lack of) capitalization. Lists of viruses within a given species are provisional at this point and will likely be amended in the near future.